Version of Amended Claims
with Markings to Show Changes Made
Corresponding to 37 CFR §1.121(c)(ii)

1(Thrice Amended). A method of reducing absorption of flavor molecules of goods stored in containers into a laminated material used for the manufacture of walls of the containers [having walls and which in use has an intended inner surface and], comprising the steps of:

providing a laminate material having a non-platelet-filled core barrier layer sandwiched between an outer layer and [, said method comprising arranging for] at least one further layer, said further layer being formed from a non-polar thermoplastic polyolefin resin filled with a platelet filler comprising talc, [to be positioned inwardly of the barrier layer,] said core barrier layer consisting essentially of a vapor impermeable non-polyolefin and having a thickness of less than 25 microns; and

storing a flavored good in a container formed from said laminate material such that said further layer of said non-polar thermoplastic polyolefin resin filled with talc extends between said flavored good and said core barrier layer;

whereby placement of said further layer of said non-polar thermoplastic polyolefin resin filled with talc inwardly of said core barrier layer relative to the flavored good reduces the absorption of flavor molecules of the flavored good into said laminate material and stiffens said laminate material allowing said laminate material to be of a relatively thin thickness.

6(Thrice Amended). A laminated material for the manufacture of a wall of a container, [having walls and which, in use, has a surface intended to be external of the container and a surface intended to be internal of the container, the laminated material] comprising:

an outer layer having a surface that forms an external surface of a wall of a container formed from said laminated material;

[an intermediate] a non-platelet-filled barrier layer consisting essentially of a non-polyolefin thermoplastic material having [, on its inner side, at least one further layer comprising] a thickness of less than 25 microns;

at least one further layer that is located on an opposite side of said barrier layer relative to said outer layer, said further layer being made of a non-polar thermoplastic polyolefin resin filled with a platelet filler comprising talc[, said barrier layer having a thickness of less than 25 microns];

whereby placement of said further layer inward of said barrier layer relative to a flavored good contained by a container made of said laminated material reduces the absorption of flavor molecules of the flavored good into said laminated material and stiffens said laminated material allowing said laminated material to be of a relatively thin thickness.

7(Twice Amended). A laminated material according to claim 6, wherein the platelet filler comprises high purity talc, and wherein the further layer has a [CIE] Commission Internationale d'Eclairage (CIE) whiteness index of at least 40.

15(Thrice Amended). A container, comprising:

[walls] a wall formed from a laminated material having a non-platelet-filled core barrier layer consisting essentially of a non-polyolefin thermoplastic material, [with] an outer layer having a surface forming an external surface of the container, and at least one further layer arranged [internally] on an opposite side of [the] said barrier layer relative to said outer layer,

said one further layer [comprising] being made of a non-polar thermoplastic polyolefin resin filled with platelets of talc, having [an] a minimum aspect ratio of at least 5 and an average aspect ratio of from 16 to 30, and [wherein the one further layer has] having a [CIE] Commission Internationale d'Eclairage (CIE) whiteness of at least 40, and

said barrier layer [has] having a thickness of less than 25 microns;

whereby placement of said further layer inward of said barrier layer relative to a flavored good contained by a container made of said laminated material reduces the absorption of flavor molecules of the flavored good into said laminated material and stiffens said laminated material allowing said laminated material to be of a relatively thin thickness.

26(Amended). A [flexible] container having walls formed from a laminated material according to claim 6.

REMARKS

Claims 1, 2, 5-7, 12, and 15-35 are pending. Independent claims 1, 6 and 15 have been amended to set forth with greater particularity the novel and patentable subject matter of the present invention. No new matter was added. It is submitted that all the claims distinguish in a patentable manner over the prior art cited by the Examiner. Accordingly, a notice of allowance is respectfully requested.

Applicant's undersigned attorney, William Bak, wishes to express his appreciation to Examiners Pyon and Patterson in charge of the subject application for the courteous and constructive interview extended on May 7, 2002. At the interview, proposed claim amendments and associated arguments relative to the patentability of the proposed claims over the prior art were discussed. New amendments are presented herein which address the Examiners' concerns stated at the Interview. Reconsideration of the present application is respectfully requested.

I. 35 USC §112, Second Paragraph, Claim Rejections

In the Office Action, the Examiner rejected claims 1, 6 and 15 under 35 USC §112, second paragraph as being indefinite. More specifically, the Examiner stated that the phrases "inwardly of the barrier layer", "intermediate barrier layer", and "an aspect ratio of at least 5 and an average aspect ratio of 16 to 30" are indefinite and that the abbreviation of CIE is not defined. The Examiner also stated that the term "flexible" as used in claim 26 is indefinite.

Method claim 1 has been amended to require the use of a laminate material having a non-platelet-filled core vapor barrier layer sandwiched between an outer layer and at least one further layer. Method claim 1 also includes the step of storing a flavored good in a container made of the laminate material. The further layer (ie., the talc-filled layer) is required to

extend between the barrier layer and the flavored good stored within the container made from the laminate material. Thus, the location of the further layer (ie., the talc-filled layer) is clearly stated by method claim 1. Applicants respectfully submit that claim 1 is definite and fully complies with 35 USC §112, second paragraph.

No new matter was added to claim 1. To this end, see: page 4, lines 2-5; page 11, lines 15-22; page 14, lines 4-12; and FIG. 4 of the present application.

Claim 6 has been amended to require a laminated material having a non-platelet-filled vapor barrier layer sandwiched between an outer layer and at least one further layer. The laminate material is intended for use in forming a container in which the outer layer forms an external surface of the container. The further layer (ie., the talc-filled layer) is required to be located on an opposite side of the barrier layer relative to the outer layer (ie., adjacent an internal surface of the container, which in turn, is adjacent to a flavored good stored in the container). Thus, the further layer (ie., the talc-filled layer) is properly positioned to extend between the barrier layer and the flavored good stored within a container made from the laminated material. Thus, the location of the barrier layer and further layer (ie., the talc-filled layer) is clearly stated by claim 6. Thus, Applicants respectfully submit that claim 6 is definite and fully complies with 35 USC §112, second paragraph.

No new matter was added to claim 6. To this end, see: page 4, lines 2-5; page 11, lines 15-22; page 14, lines 4-12; and FIG. 4 of the present application.

Claim 15 has been amended to require a container wall made of a laminated material having a non-platelet-filled vapor barrier layer sandwiched between an outer layer and at least one further layer. The outer layer is required to form an external surface of the container. The further layer (ie., the talc-filled layer) is required to be located on an opposite side of the barrier layer relative to the outer layer (ie., adjacent an internal surface of the container, which

in turn, is adjacent to a flavored good stored in the container). Thus, the further layer (ie., the talc-filled layer) is properly positioned to extend between the barrier layer and the flavored good stored within the container. Thus, the location of the barrier layer and further layer (ie., the talc-filled layer) is clearly stated by claim 15. In addition, the definition of the abbreviation "CIE" has been added, and the word "minimum" has been added to the phrase "a minimum aspect ratio of at least 5 and an average aspect ratio of 16 to 30". Applicants respectfully submit that claim 15 is definite and fully complies with 35 USC §112, second paragraph.

No new matter was added to claim 15. To this end, see: page 4, lines 2-5; page 11, lines 15-22; page 14, lines 4-12; and FIG. 4 of the present application. Also see page 6, line 15, of the present application for the definition of the abbreviation CIE, and page 6, lines 6-11, of the present application for a disclosure of the significance of "minimum aspect ratio" relative to "average aspect ratio".

In addition, the term "flexible" has been deleted from claim 26. Thus, none of the pending claims contains the word "flexible".

For all of the above reasons, Applicants submit that the claims of the present application are in compliance with 35 USC §112, second paragraph. Reconsideration and removal of all claim rejections under 35 USC §112, second paragraph, is respectfully requested.

II. 35 USC §102(b) Claim Rejections

In the Office Action, the Examiner rejected all the pending claims, 1, 5-7, 12 and 15-35 under 35 USC §102(b) as being anticipated in view of U.S. Patent No. 4,528,235 issued to Sacks et al.

The Sacks patent discloses a thin polymer film for use as a flexible wrap around oxygen-sensitive food products having a short shelf-life. The disclosed film is not sufficiently durable for use in making a semi-rigid container body, such as a squeeze tube for packaging a flavored good having a long shelf-life (ie., flavored toothpaste). The single layer film includes a platelet filler for purposes of decreasing gas and vapor permeability of the film. Importantly, the Sacks patent provides no disclosure with respect to absorption of flavor molecules from flavored goods into the film and does not recognize the significance of absorption as a cause of loss of flavoring of flavored goods that have a shelf-life, for instance, as long as three years. Thus, Sacks does not address nor attempt to solve the problem to which the present invention is concerned.

The majority of the Sacks patent relates to a thin flexible single layer film utilized as a form-fitting wrap. Thus, the majority of the Sacks patent is clearly not relevant to the multilayer laminate of the present invention that can be utilized to make containers that hold a given shape, (ie., toothpaste tubes).

The Sacks patent discloses a film laminate only in column 2, lines 17-43; column 3, lines 49-56; column 6, lines 28-54; and in Examples 25 and 26. More specifically, on column 2, lines 17-43; column 3, lines 49-56; and column 6, lines 28-50; and in Example 25, the Sacks patent discloses a two layer laminate in which both layers are talc-filled. On column 6, lines 51-54, the Sacks patent states that the laminate can "have a variety of nonfilled film layers" in addition to the pair of talc-filled layers discussed above. However, column 6, lines 51-54, of the Sacks patent provides no disclosure of where the "nonfilled film layers" are to be located within the laminate and no disclosure of the material from which the "nonfilled film layers" are made. The only disclosure of such an embodiment is in Example 26 of the Sacks patent in which a three layer laminate is disclosed having a talc-filled core layer

sandwiched between inner and outer layers of polyethylene that are free of talc (ie., non-talc filled layers).

In contrast, the present invention as claimed in independent claims 1, 6 and 15 clearly requires a multilayer laminate that has an outer layer, a non-platelet-filled vapor barrier layer, and a talc-filled inner layer and that can be utilized to form a form-holding container body, such as a tube of toothpaste. The talc-filled inner layer is required to be located between the barrier layer and a flavored good contained within a container made of the laminate material. This required placement of the talc-filled inner layer relative to the flavored good provides the significant benefit of reducing absorption of flavor molecules of the flavored good into the laminate material and into the non-platelet-filled vapor barrier layer that would otherwise occur. A reduction of absorption of flavor molecules is especially important when the good being packaged is a flavored good having a long shelf-life (ie., a three year shelf life).

In the Office Action, the Examiner states that "For purposes of examination, it will be assumed that the (talc-filled) layer is on either side of the barrier layer." With the amendment of claims 1, 6 and 15 made herein, it is now clear that the location of the talc-filled layer within the laminate material of the present invention is between the non-platelet-filled barrier layer and the flavored good stored within a container made of the laminate material.

The Sacks patent does not disclose in any manner or form this placement of the talc-filled polyolefin layer relative to a non-platelet-filled, non-polyolefin barrier layer and a flavored good.

In addition, method claim 1 of the present invention requires the process step of storing a flavored good in a container formed of the laminate material such that the talc-filled non-polar thermoplastic polyolefin resin layer extends between the flavored good and the non-platelet-filled core barrier layer. The Sacks patent does not disclose such a method step.

Still further, the use of the inward placed talc-filled polyolefin layer in combination with the non-platelet-filled non-polyolefin vapor barrier layer permits the vapor barrier layer to be reduced to less than 25 microns and yet provide the laminate material as a whole with low vapor permeability and a desired stiffness. The significance of reducing the thickness of the non-polyolefin vapor impermeable barrier layer is that this material is extremely expensive in comparison to the other materials utilized in the laminate. Independent claims 1, 6 and 15 all include this limitation. The Sacks patent does not disclose the claimed combination of an inward placed talc-filled polyolefin layer and a non-platelet-filled non-polyolefin vapor barrier layer that has a thickness of less than 25 microns.

The Applicants respectfully submit that the Sacks patent does not disclose all the limitations of the independent claims of the present invention as required by an anticipation rejection under 35 USC §102(b). The Sacks patent clearly fails to teach the claimed combination recited by the independent claims. In particular, the Sacks patent fails to disclose the claimed placement and configuration of the layers that constitute the multilayer laminate of the present invention, and the claimed use of a non-platelet-filled core vapor barrier layer having a thickness of less than 25 microns.

For the above reasons, the Applicants respectfully submit that independent claims 1, 6 and 15 are patentable over and are not anticipated by the Sacks patent under 35 USC §102(b). The remaining dependent claims are submitted as being patentable over the Sacks patent for the same reasons.

Accordingly, reconsideration and removal of all §102(b) rejections is requested.

III. 35 USC §103(a) Claim Rejections

In the Office Action, the Examiner maintained the rejection of claims 15, 18 and 19 under 35 USC §103(a) as being obvious in view of U.S. Patent No. 4,528,235 issued to Sacks et al. and has maintained the rejection of claim 15 under 35 USC §103(a) as being obvious in view of the combination of U.S. Patent No. 4,528,235 issued to Sacks et al. and published European Patent Application No. 275,102 of Newman et al..

In the present invention, the claimed method, laminate material and container made therefrom provide improved prevention of the loss of flavoring of flavored good contents of the container because it not only restricts permeability, but also restricts absorption of flavoring molecules from the flavored good into the walls of the laminate. This is accomplished by the placement of the talc-filled polyolefin layer between the non-platelet-filled non-polyolefin vapor barrier layer and the flavored goods contained within the container. This claimed placement is crucial to achieve a reduction in the absorption of flavoring molecules into the walls of the laminate material. In addition, the combination of the inward placed talc-filled polyolefin layer with a non-platelet-filled non-polyolefin vapor barrier layer permits the thickness of the non-polyolefin vapor barrier layer to be reduced to less than 25 microns and yet provide the laminate material as a whole with low vapor permeability and with a desired wall stiffness.

Neither the Sacks patent nor the Newman patent discloses a method or laminate material which reduces absorption of flavoring molecules of a flavored good located in a container made of the laminate material into the walls of the laminate.

There is a clear physical distinction between absorbability and permeability. Sacks measures vapor and oxygen passing through a material in a given time. Thus, Sacks is only concerned with permeability. In addition, the films disclosed by the Sacks patent are intended

for use in wrapping oxygen sensitive food products that have a short shelf-life. In contrast, the present invention measures the amount of flavoring molecules absorbed into a material by its weight gain over a given extended time. Thus, the laminate material of the present invention is intended for use with flavored products that have a relatively long shelf-life.

For example, the laminate material of the present invention may be utilized as a toothpaste container for containing flavored toothpaste. The filled and sealed toothpaste container may not be opened for the first time by an end user until three years after the flavored toothpaste was filled and sealed in the container. If absorption of the flavoring molecules is not prevented, such as with the materials disclosed by the Sacks and Newman references, the end user will be provided with a toothpaste that is flat and has lost its as advertized flavor. Alternatively, if the layers of the laminate material utilized to package the flavored toothpaste is configured as claimed by the claims of the present invention, the toothpaste will still retain the advertized flavoring since the flavoring molecules will be prevented from being absorbed into the walls of the toothpaste container.

The cited references are silent regarding the problem of decreasing absorbability and do not disclose how to restrict absorbability and maintain a low permeability while reducing the thickness of an expensive non-platelet-filled non-polyolefin vapor barrier layer. Further, the cited references provide no motivation to modify their laminate structures as claimed by the present invention because neither teaches anything with respect to reducing the absorption of flavoring molecules into the walls of laminates. The cited references are concerned only with permeability, not absorbability.

For these reasons, the Sacks patent and the Newman reference fail to fairly teach, suggest, or disclose the claimed combination recited by the independent claims of the present application.

Thus, claims 15, 18 and 19 are submitted as being patentable over the Sacks patent when taken alone, or when taken in combination with the Newman reference.

Accordingly, reconsideration and removal of the §103(a) rejections are requested.

VI. Conclusion

In view of the amendments and remarks, Applicants respectfully submit that the rejections have been overcome and that the present application is in condition for allowance. Thus, a favorable action on the merits is therefore requested.

Please charge any deficiency or credit any overpayment for entering this Amendment to our deposit account no. 08-3040.

Respectfully submitted,
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